

16. A process according to claim 15, wherein the alkaline treatment lasts at least 30 minutes.

17. A process according to claim 15, wherein the alkaline treatment lasts at least 60 minutes.

18. A process according to claim 15, wherein the alkaline treatment is performed at a pH higher than 10.5.

19. A process according to claim 15, wherein the alkali metal hypochlorite is sodium hypochlorite.

20. A process according to claim 15, wherein the oxidized starch product is treated with the alkali metal hypochlorite at a pH between 6.5 and 8.5.

B1
cont'd
MDR

21. An oxidized starch obtained by a process comprising

- i. treating a root or tuber starch comprising at least 95 wt.% of amylopectin, based on dry substance of the starch, with an alkali metal hypochlorite, at a pH of between 6.5 to 8.5, to form an oxidized starch product; and
- ii. subjecting the oxidized starch product to an alkaline treatment, wherein the alkaline treatment comprises keeping the oxidized starch product at a temperature of 20-50°C and a pH higher than 10, for at least 15 minutes.

22. An oxidized starch, wherein
(I.V. * ZGT)-1 \geq X, and

11

$$Bu_{top} / BU_{90-20} \leq Y,$$

wherein I.V. is the intrinsic viscosity of the oxidized starch;

ZGT is the acid number of the oxidized starch;

BU_{90-20} is the Brabender viscosity of the oxidized starch after being held for 20 minutes at 90°C, measured using the oxidized starch in a concentration resulting in a BU_{90-20} between 100 and 500 BU;

Bu_{top} is the peak Brabender viscosity of the oxidized starch, measured at the same concentration as the BU_{90-20} ;

X is 0.015; and

Y is 17.

23. The oxidized starch according to claim 22, wherein X is 0.017.

24. The oxidized starch according to claim 22, wherein X is 0.019.

25. The oxidized starch according to claim 22, wherein Y is 13.

26. The oxidized starch according to claim 22, wherein Y is 10.

27. A binder in paper coatings or surface sizings consisting essentially of an oxidized starch obtained by a process comprising

i. treating a root or tuber starch comprising at least 95 wt.% of amylopectin, based on dry substance of the starch, with an alkali metal hypochlorite, at a pH between 6.5

and 8.5, to form an oxidized starch product; and

ii. subjecting the oxidized starch product to an alkaline treatment, wherein the alkaline treatment comprises keeping the oxidized starch product at a temperature of 20-50°C and a pH higher than 10, for at least 15 minutes.

28. An adhesive consisting essentially of an oxidized starch obtained by a process comprising

i. treating a root or tuber starch comprising at least 95 wt.% of amylopectin, based on dry substance of the starch, with an alkali metal hypochlorite, at a pH between 6.5 and 8.5, to form an oxidized starch product; and

ii. subjecting the oxidized starch product to an alkaline treatment, wherein the alkaline treatment comprises keeping the oxidized starch product at a temperature of 20-50°C and a pH higher than 10, for at least 15 minutes.

29. A protective colloid for stabilizing emulsions consisting essentially of an oxidized starch obtained by a process comprising

i. treating a root or tuber starch comprising at least 95 wt.% of amylopectin, based on dry substance of the starch, with an alkali metal hypochlorite, at a pH between 6.5 and 8.5, to form an oxidized starch product; and

ii. subjecting the oxidized starch product to an alkaline treatment, wherein the alkaline treatment comprises keeping the oxidized starch product at a temperature of 20-50°C and a pH higher than 10, for at least 15 minutes.

30. A coating of glass fibers in warp yarn sizing consisting essentially of an oxidized starch obtained by a process comprising

- i. treating a root or tuber starch comprising at least 95 wt.% of amylopectin, based on dry substance of the starch, with an alkali metal hypochlorite, at a pH between 6.5 and 8.5, to form an oxidized starch product; and
- ii. subjecting the oxidized starch product to an alkaline treatment, wherein the alkaline treatment comprises keeping the oxidized starch product at a temperature of 20-50°C and a pH higher than 10, for at least 15 minutes.

31. A food additive consisting essentially of an oxidized starch obtained by a process comprising

- i. treating a root or tuber starch comprising at least 95 wt.% of amylopectin, based on dry substance of the starch, with an alkali metal hypochlorite, at a pH between 6.5 and 8.5, to form an oxidized starch product; and
- ii. subjecting the oxidized starch product to an alkaline treatment, wherein the alkaline treatment comprises keeping the oxidized starch product at a temperature of 20-50°C and a pH higher than 10, for at least 15 minutes.

AFTER THE CLAIMS:

After the claims, on separate sheet, please add the following (a copy of the Abstract on a separate sheet is provided herein for Examiner's convenience):